

Date: Sat, 9 Apr 94 04:30:20 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #97
To: Ham-Ant

Ham-Ant Digest Sat, 9 Apr 94 Volume 94 : Issue 97

Today's Topics:

Antenna materials... (4 msgs)
 Comet "Baby" antenna
 g-whip
 HF antenna help (2 msgs)
 Ringo RangerII SWR problems...

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 8 Apr 94 16:34:20 GMT
From: hp-cv!hp-pcd!hpcvsnz!tomb@hplabs.hp.com
Subject: Antenna materials...
To: ham-ant@ucsd.edu

Toma Elton E (3eet@Jeff-Lab.QueensU.CA) wrote:

: What about the copper pipe J-poles? does the copper oxidize over time, and turn
green?
: Will this affect the performance?

Barry Ornitz, a chemical engineer, has in the past suggested a coat of acrylic
paint to protect antenna parts exposed to the weather. Acrylic plastic
holds up well under UV. I would think this would be a good idea for a
copper pipe antenna. Another ham I work with claims that indeed oxidation
on copper at VHF-UHF frequencies kills the performance; he had experience
with a 440 beam built from copper, and actually measured the before and
after (oxidation) gain. He strongly recommended against using bare copper.

(Perhaps you can get it nickel plated and gold flashed--be sure the plating is well under a skin depth! ;-)

73, K7ITM

Date: 8 Apr 94 19:48:55 GMT
From: sdd.hp.com!col.hp.com!srngenprp!alanb@hplabs.hp.com
Subject: Antenna materials...
To: ham-ant@ucsd.edu

I don't think the loss of the metal is important for most applications. Some years back I built a "quick and dirty" 6 meter beam for the upcoming VHF contest. I made it out of steel electrical conduit. I calculated what the RF resistance would be at 6 meters and concluded that the losses would be acceptably low. Losses would be worse on 2 meters (assuming 1/3 the element diameter), so it's probably not a good idea to use steel on that band.

I built the beam, and it worked great.

By the way, any magnetic material (like steel) has much higher RF losses than non-magnetic materials like aluminum and copper. The high permeability causes the skin depth to be much shallower, resulting in higher RF resistance.

AL N1AL

Date: Thu, 7 Apr 1994 21:57:21 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!news.ossi.com!news.fai.com!amdahl!pacbell.com!sgiblab!swrinde!gatech!howland.reston.ans.net!torn!news.ccs.queensu.ca!ccs-server.QueensU.CA!3eet@network
Subject: Antenna materials...
To: ham-ant@ucsd.edu

In article <3644BAB23EDF602F36@qut.edu.au>, RICKARD@qut.EDU.AU (Doug Rickard) writes:

|>
|> To: ham-ant@ucsd.edu
|> Subject: What material to use for antennas?
|>
|> >I'm thinking about using some sort of brazing rod, but don't
|> >know enough to make a decision.
|>
|> Be aware that normal brass brazing rod has a high proportion of phosphorous

|> and other materials in its composition. These all help to make it a
|> better welding rod. However they do increase the resistivity of the
|> material and degrade antenna performance. Even aluminium welding rod
|> contains a mix of silicon and/or magnesium and so has an increased
|> resistivity. Normal aluminium has much less resistivity, and provided
|> you can make joints that will not oxidise over time, should provide
|> better performance. I use a utectic aluminium brazing rod 'Techni-2000'
|> to braze all aluminium-aluminium joints on the antennas I fabricate.
|> Only a normal gas torch is needed for this. The rod melts at about 200
|> degrees less than the aluminium does, but care must still be exercised.
|>
|> Doug
|> VK4ZDR@VK4DIT.GOLD.QLD.AUS.OC
|> rickard@qut.edu.au
|>

What about the copper pipe J-poles? does the copper oxidize over time, and turn green?

Will this affect the performance?

Elton Toma (building copper pipe J-pole for FM use)

Date: Fri, 8 Apr 1994 14:41:26 GMT
From: ihnp4.ucsd.edu!mvb.saic.com!news.cerf.net!usc!howland.reston.ans.net!pipex!
bnr.co.uk!corpgate!news.utdallas.edu!feenix.metronet.com!serafin@network.ucsd.edu
Subject: Antenna materials...
To: ham-ant@ucsd.edu

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>degrees less than the aluminium does, but care must still be exercised.

Why not use the copper-coated steel welding rods? As far as I know they
are nothing more than a thin copper coat on a bare steel rod to inhibit
corrosion. They are also cheaper than the brass or aluminum. 36" long
1/8" welding rod only costs a few cents.

Date: Thu, 7 Apr 1994 15:48:45 GMT
From: ihnp4.ucsd.edu!usc!math.ohio-state.edu!magnus.acs.ohio-state.edu!csn!
col.hp.com!news.dtc.hp.com!hplextra!hpcss01!markb@network.ucsd.edu
Subject: Comet "Baby" antenna
To: ham-ant@ucsd.edu

I bought one. I tested it on a vector network analyser and it looks
great at 1.2 G, OK at 440 and, pretty bad at 2m. So If you are on higher
bands maybe you'll like it. On 2m you will drop about 3 S units from
a normal duck.

It's awful cute.

Date: 8 Apr 94 19:30:31 GMT
From: news-mail-gateway@ucsd.edu
Subject: g-whip
To: ham-ant@ucsd.edu

A FRIEND OF MINE USED AT ONE TIME A MOBILE ANT. CALLED A G-WHIP.. IS
THERE ANY ONE OUT THERE IN INTERNET LAND THAT EVER HERAD OF SUCH AN
ANIMIAL OR HAS THE SPECS ON THE ANT... THANKS KEN HOWLAND - N1AVA
KHOWLAND@FOXBORO.COM

Date: 8 Apr 94 14:14:52 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!vixen.cso.uiuc.edu!aries!
hawley@ucbvax.berkeley.edu
Subject: HF antenna help
To: ham-ant@ucsd.edu

HarrisR@yvax.byu.edu (Richard Harris) writes:

>I need some help please.

>I just recently passed the 5 written exams and 5 wpm code and am interested
>in setting up an antenna for HF. As I have not had any experience with
>amateur radio, transceivers, and antenna I need help. I would like to set
>up an antenna that will give me an opportunity to gain some experience on
>the various HF bands. I can not afford a tower so would like something
>that is less expensive to install. At some point in the future I plan on
>installing a tower but not now. I'll wait until I have gained some
>experience and have a better idea of what I would like to do.

>Have you got any recommendations for a multiband antenna (\$300-\$500 range)
>that would get me on the air and allow me to gain some experience with a
>variety of the HF bands and modes. I have a home with a large yard but
>there are lots of young children in the neighborhood that are very
>inquisitive so I will need to consider this in the installation of whatever
>antenna I purchase.

Put up a 100 or so foot dipole as high as you can get it, and feed it with
450 ohm ladder line. Run it through a 2KW tuner to a 100 Watt transceiver.
If you are on the air 100 years, you will never do much better than this in
terms of simplicity, low cost, works very well, and enjoying the QSO instead
of fighting the equipment. Not to say you shouldn't try everything...but while
you're trying it, this setup will enable you to discuss all the other Ham junk
like linears, towers, wire arrays, nine band beams, etc., (that you are
experimenting with) with all the other hams. Congratulations on the license,
welcome, and I know you'll enjoy being a Ham.

73, Chuck Hawley, KE9UW, Urbana, IL

>Richard Harris
>Waiting for the FCC to send me my license.

Date: Thu, 07 Apr 1994 22:27:12 -0700
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!news.byu.edu!
yvax.byu.edu!harris-home.byu.edu!user@network.ucsd.edu
Subject: HF antenna help
To: ham-ant@ucsd.edu

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Thanks very much for your help. E-Mail is OK if you wouldn't mind.

Richard Harris
Waiting for the FCC to send me my license.

Date: Fri, 8 Apr 1994 05:09:32 GMT
From: mvb.saic.com!news.cerf.net!usc!howland.reston.ans.net!europa.eng.gtefsd.com!news.umbc.edu!eff!neoucom.edu!news.ysu.edu!malgudi.oar.net!utnetw.utoledo.edu!uoft02.utoledo.@ihnp4.ucsd.edu
Subject: Ringo RangerII SWR problems...
To: ham-ant@ucsd.edu

I'm having problems getting a good match on my newly purchased Ringo Ranger II when on high power on my HT (7 watts).

I'm using:

HTX 202 transmitter, 75 ft of RG-213, 2 1/2 ft RG-8 jumper, a Para Dynamics 2m/440 SWR/Power meter (small mobil variety, just like Radio Shack's)

I measured and set for best match at 146Mhz, and it appears my best match IS there. SWR increases as I move from 146 and is at highest at 144 and 148Mhz. SWR is definately acceptable on low power (1 watt), with it being < 2.0 . On high power the situation changes, as the lowest SWR is 2.6 at appx. 146Mhz, and is greater than 4.0 at 144 and 148 Mhz.

A friend told me that the problem may be the 'loop' at the bottom of fiberglass 'whip'. Could this be the problem? Also, the ground plane radials are only a few inches above the roof shingles, and the 'jumper coax' is not perfectly taut because of this.

I'd appreciate any help to this problem, if they could be also emailed to me, that would be great! (either way is fine though)

Thanks and 73s!!!

Brad Steinman, N8ZRP
The University of Toledo

Internet: cscon0151@uoft02.utoledo.edu (131.183.1.4)
 stu0105@uoft01.utoledo.edu (131.183.1.2)
 N8ZRP@wsu.n8fow.ampr.org (44.102.48.2)
Packet : N8ZRP@w2xo.#swpa.pa.usa.noam (Amateur Radio Mail Gateway)
* Member of the All-Ohio Scanner Club (OH-48-1859) * yah...

End of Ham-Ant Digest V94 #97
